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			ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/766,628
Filing Date: January 28, 2004
Appellant(s): HARP ET AL.

**MAILED
MAY 17 2007
GROUP 3700**

Kevin Lynn Wildenstein
(Reg. No. 39,072)

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed **12/12/2006** appealing from the Office action mailed **09/19/2006**.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. Appellant states that 1-6 and 10-20 are rejected as being anticipated by or

unpatentable over U.S. Patent No. 5,469,839 to Kasulis et al. (the "Kasulis patent") under 35 U.S.C. § 102. It is noted however that these claims are rejected under **35 U.S.C. 102(b)** as anticipated by or, in the alternative, under **35 U.S.C. 103(a)** as obvious.

The changes are as follows:

Claims 1-6 and 10-20 rejected under **35 U.S.C. 102(b)** as anticipated by or, in the alternative, under **35 U.S.C. 103(a)** as obvious over US005469839 (KASULIS et al)(of record) as supported by the prior art teachings of US003877802 (SHUMAKER), US004309142 (GREENSPAN) and US003942879 (PLEDGER), as well as GB2220060 (BUTTERFIELD), US004129114 (HISER) and US004667607 (FLEMING).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US005469839	KASULIS et al	November 28, 1995
US003877802	SHUMAKER	January 5, 1982
US004309142	GREENSPAN	April 15, 1975
US003942879	PLEDGER	March 9, 1976
US004129114	HISER	December 12, 1978
US004667607	FLEMING	May 26, 1987
GB2220060	BUTTERFIELD	December 28, 1989
JP 2003-79507	KAWAMOTO	March 18, 2003 (English Language

Translation attached)

APPENDIX B (Evidence Appendix)

A courtesy copy of Affidavit Pursuant To 37 C.F.R. § 1.132 of Dr. Yashvinder Sabharwal is herewith attached. This Affidavit was previously submitted in

Appellants' Response to August 24, 2005 Office Action (filed December 23, 2005).

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-6 and 10-20 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US005469839 (KASULIS et al)**(of record) as supported by the prior art teachings of **US003877802 (SHUMAKER)**, **US004309142 (GREENSPAN)** and **US003942879 (PLEDGER)**, as well as **GB2220060 (BUTTERFIELD)**, **US004129114 (HISER)** and **US004667607 (FLEMING)**.

With regard to claims 1-6 and 10-20, the recitations "A firelight" and "for use within a fireplace" have not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Also, with regard to claims 1-6 and 10-20, the phrase "measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace" is deemed a recitation of intended use and as such fails to impart any a positive structural limitation(s) which would distinguish the claimed invention over the prior art of record. It must be emphasized that applicant's claimed invention is not positively recited as the combination of a firebox and reflective system. Rather the invention is directed to "a reflective system" that is "for use" in a fireplace wherein the light reflective material is measured "to substantially fit within" and to couple substantially parallel to "any pre-determined interior surface of the firebox". A recitation of the intended use of the claimed invention

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must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

US005469839 (KASULIS et al) shows and discloses (Figures 8 and 9) a firelight reflective system for use within a fireplace comprising:

- at least one high temperature mirrored glass light or image reflective material having a viewable surface and a coupling surface, the viewable surface having an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems the system measured to substantially fit within, and couple to, one or more interior surfaces of the fireplace; and
- coupling surfaces (for example, 60, 90);
- at least three of the reflectors (76, 86, 86; see figures 8 and 9) are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom) thereby providing a three-dimensional view at least to some degree and at least from one viewer's perspective.

US005469839 (KASULIS et al) discloses the following (see column 5, lines 58-column 6, line 8):

“(10) In the embodiment shown in FIGS. 8 and 9, the reflector assembly 74 is fabricated of a plurality of separate components. Such components include a vertical reflector 76 positioned at the rear of the fireplace above that is an angled reflector 78. Such reflectors have downturned edges 80 with apertures 82 for coupling with additional component elements and the interior faces of the side walls of the fireplace.

(11) The next adjacent components are the side reflectors 86. Two similarly shaped side reflectors are utilized. Such reflectors are rectangular in

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configuration except at one interior corner edge 88 wherein an angle is formed to accommodate the angled reflector 78 at the back of the fireplace. In addition, apertures 90 are formed in the side plates for coupling with the interior side spaces of the fireplace as well as the apertures 82 in the edges of the back and angled reflector plates. FIG. 9 is an enlarged perspective showing of one of the apertures 90 in plate 86 as illustrative of the waycoupling may be effected through screws 92."

US004309142 (GREENSPAN) discloses (beginning column 10, line 19) the following:

(22) The nature of the planar reflectors which makes the above described operation of the display device 10 possible will now be described. In FIG. 5, a conventional planar reflector 90 is shown. Such conventional reflectors are well known and include mirrors as well as other highly polished surfaces. All conventional planar reflectors follow the well known optical law of reflection which, simply stated, is that the angle of incidence on a reflector is equal to the angle of reflection from the reflector.

US003877802 (SHUMAKER) discloses (beginning column 5, line 58) the following:

(22) ... This is shown diagrammically in FIGS. 1 and 2. There, the straight line path between the operator 42 and mirror 60 is identified by Roman Numeral II. The straight line path between the mirror 60 and a portion (A) of the digging edge 40 is identified by Roman Numeral III. Following the basic law of mirrors (the angle of incidence equals the angle of reflection) line II and line III will form the same angle with respect to the plane of the mirror. Thus, the operator 42 can see a selected portion of the digging edge of the bucket by viewing the mirror 60 through an aperture 64 in the spill wall 48 portion of the backwall 46. This is diagrammed in FIG. 5.

US003942879 (PLEDGER) discloses (beginning column 1, line 15) the following:

(3) Heretofore, the steering of a mirror to reflect and direct an image, beam, light ray, or other incident radiation hereinafter referred to as the "beam" has involved manually or mechanically positioning the mirror in a manner such that the mirror reflects the beam according too the law of mirror reflection, viz: the angle of incidence is equal to the angle of reflection. Accordingly, the angle between the incident reflected rays is twice the angle of incidence, and the normal line to the plane of the mirror bisects this angle. The task of precisely directing a reflected image or beam involves positioning the mirror

such that the normal to the mirror bisects the subtended angle between the source of the beam and the desired position of the beam.

GB2220060 (BUTTERFIELD) discloses (see page 8, line 8) the following:

"Sheet 17 is preferably made of heat-resistant glass ...".

US004129114 (HISER) (of record) discloses (see page 8, line 8) the following:

(23) The decorative aspect of the unit 10 of the present invention as well as improved heat transfer into the room in which the unit 10 is located is enhanced by a highly reflective mirrored fire wall insert 110 which is adapted to be affixed to the firewall 18. Since fire in the fire box 12 is partially set into the room, **the mirrored insert provides a startling panorama of reflected and re-reflected images of the fire.**

(24) The open front and sides of the fire box 12 are enclosed by a plurality of decorative transparent doors 112 which include a pair of doors on either side of the fire box and a pair of doors traversing the front of the fire box. **Each of the doors 112 comprises a transparent pane 114, which may be constructed as required of a suitable transparent material such as heat treated and/or tempered glass.**

US004667607 (FLEMING) discloses (column 5, beginning line 35; and column 7, beginning line 9) the following:

(13) In the preferred form of the invention, an inner **face sheet 12** of the panel 10 is provided by **a sheet of high temperature and thermal shock resistant material** such as clear glass material (such as is known in the trade as "Vycor" brand 96% silica glass) **which has a high temperature resistance to thermal shock.** Another surface sheet 13 of the panel 10 is also preferably provided in a high temperature resistance material but which may have a thermal resistance somewhat less than the material forming the inner sheet 12, e.g. a material such as tempered glass. (column 5, beginning line 35)

(25) Referring now to FIG. 5, a further embodiment of the invention is provided whereby the **reflectorization is shown to be provided as treatment particles or a screen matrix embedded in a portion of the inner sheet 12 such as during formation of the inner sheet 12.** This is the preferred embodiment of the invention where reflectorization is embedded into the sheets forming the

panel 10 however, in an alternative embodiment of the invention, the reflectorization 14 can also be provided in the sheet 13.

(26) While reflectorization is described in this form of the invention as being in the form of a substantially mirrored surface using materials such as chromium, nickel, aluminum or metal alloy or oxide treatments, it will be appreciated that in alternative forms of the invention. Other reflectorization materials may be utilized such as those where the proportion of the incident radiant heat reflected varies in respect of certain radiant heat wavelengths to enable selective reflection of radiant heat back into the cavity 7; e.g. materials such as particles, screens, sheets, films, layers and the like having reflective properties.

With regard to claims 1-6 and 10-20, applicant's attention is directed to Figure 8 of the prior art reference **US005469839 (KASULIS et al)** which clearly illustrates a glass mirrored material having both image and light reflective characteristics where, for example, an image of a burning log set (94) and an image of the flames (at 78) are located within the vertical surfaces (76, 78, 86) and presented by the reflective material to a viewer at least in a location oriented according to the perspective represented in figure 8 of **US005469839 (KASULIS et al)**.

Thus, since each reflective panel of **US005469839 (KASULIS et al)** displays an image to a viewer that is located within the vertical surfaces, the reflective panels of **US005469839 (KASULIS et al)** would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems in the manner set forth in applicant's claims. And, as supported by **US003877802 (SHUMAKER)**, **US004309142 (GREENSPAN)** and **US003942879 (PLEDGER)**, the examiner maintains the position that since each reflective panel of **US005469839 (KASULIS et al)** displays an image to a viewer that is located within the vertical surfaces, the reflective panels of **US005469839 (KASULIS et al)** being oriented parallel to the wall of a firebox, would necessarily and inherently have an angle of incidence and an angle of reflection which are both substantially equal as viewed by a viewer of the systems and would provide a three-dimensional view at least to some degree and at least from one viewer's "perspective", in the manner set forth in applicant's claims.

In regard to claims 2 and 12, for example, the temperature resistant mirrored glass material of **US005469839 (KASULIS et al)** would be thought of by a person having ordinary skill in the art to necessarily, or obviously, be of the “tempered” glass type since non-tempered glass would not be capable of withstanding thermal expansion and contraction thereof due to thermal cycling of the system. Tempering being a well known process for stabilizing glassware when used in high temperature conditions. In support of this conclusion the Examiner relies in the following prior art documents the evidence presented in **GB2220060 (BUTTERFIELD)**, **US004129114 (HISER)** and **US004667607 (FLEMING)**.

Claims 8 and 9 rejected under 35 U.S.C. 103(a)

Claims 8 and 9 rejected under 35 U.S.C. 103(a) as being unpatentable over **US005469839 (KASULIS et al)** in view of **JP 2003-79507**.

US005469839 (KASULIS et al) shows and discloses the invention substantially as set forth in the claims with possible exception to:

- a heat resistant adhesive being adapted to substantially permanently couple the coupling surface to the interior surfaces of the fireplace.

JP 2003-79507 teaches, from applicant’s same flame display field of endeavor coupling mirrors to the interior surface of a chamber body with adhesive.

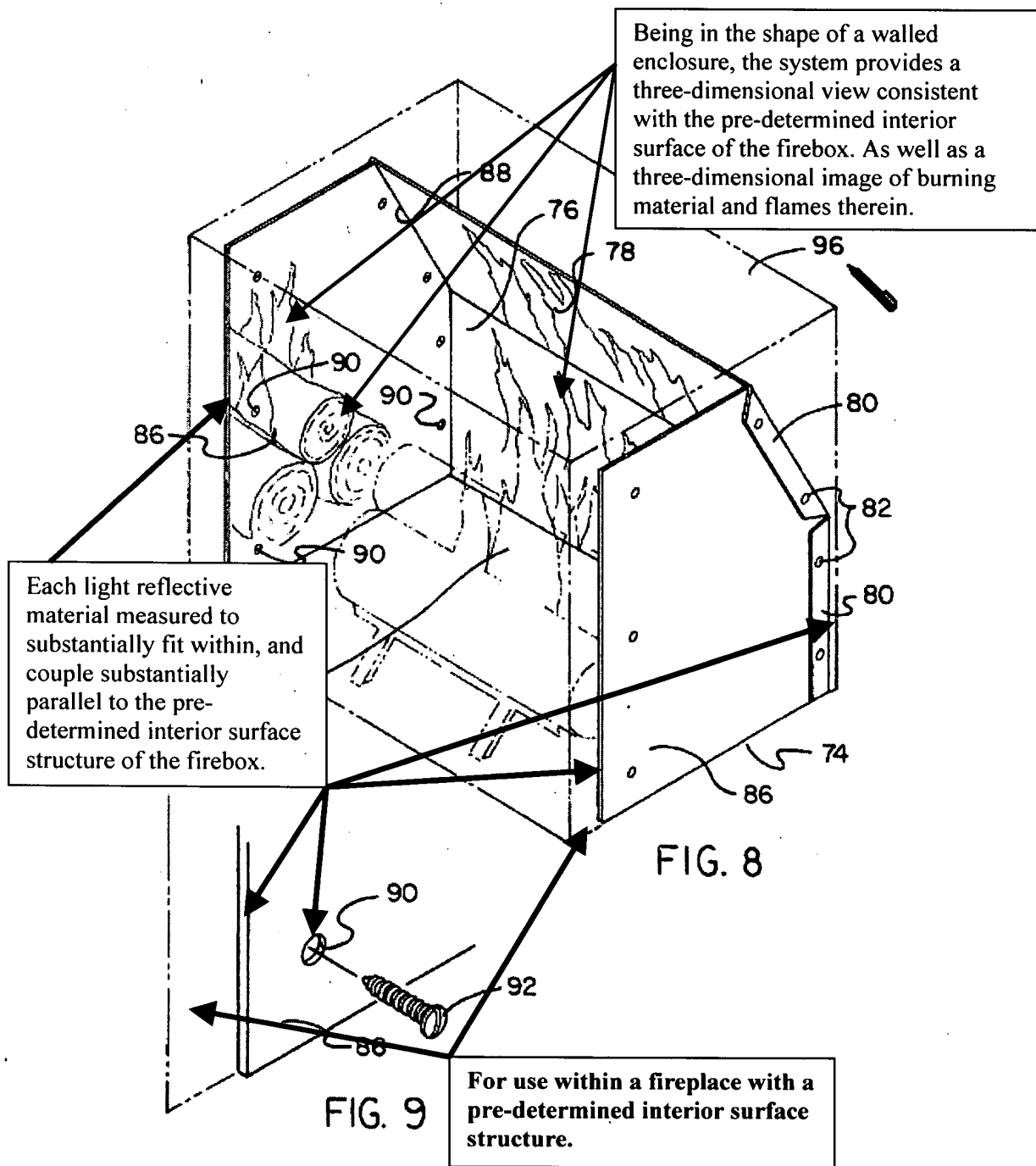
In regard to claims 8 and 9, for the purpose substantially permanently coupling the mirror to the fireplace it would have been obvious to a person having ordinary skill in the art to apply and adhesive, have the necessary heat-resistant properties, to the surface to the interior surfaces of the fireplace, in view of the teaching of **JP 2003-79507**.

(10) Response to Argument

Appellant’s comments made in the footnote appearing on page 7 of the Appeal Brief are noted. In this regard Appellants argue “the Office's combination of prior art to fill the gaps

recited in the present invention is legally improper under Section 102 because every limitation of the present invention under Section 102 "must identically appear in a single prior art reference[.]'" *Gechter v. Davidson*, 116 F.3d 1454 (Fed. Cir. 1997)" and therefore legally impermissible. Appellants are reminded however that the claims are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious. That is, by rejecting claims **1-6** and **10-20** under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **US005469839 (KASULIS et al)**(of record) as supported by the prior art teachings of **US003877802 (SHUMAKER)**, **US004309142 (GREENSPAN)** and **US003942879 (PLEDGER)**, as well as **GB2220060 (BUTTERFIELD)**, **US004129114 (HISER)** and **US004667607 (FLEMING)**, the examiner has provided a basis in fact and technical reasoning to reasonably support the determination that the allegedly inherent characteristic of certain aspects of the claimed invention necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

With regard to claims 1, 11 and 17, Appellants argue that the "recitation of the term "each" light reflective material is important, because this recitation applies to every light reflective material utilized in this invention". That is because "Claims 1, 11 and 17 all recite that each light reflective material is measured to substantially fit within, and couple substantially parallel to, the interior surface structure of the firebox so that a three-dimensional view consistent with the pre-determined interior surface of the firebox is provided.". While it is noted that the recitation "each light reflective material" is important and applies to every light reflective material utilized in Appellants' invention, this recitation does not distinguish the claimed invention over Kasulis which has at least three of the mirror reflectors (76, 86, 86; see figures 8 and 9) are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom), albeit Kasulis includes an additional panel (78) oriented at an angle with relationship to surface (78). In this regard the claimed invention is anticipated by the mirror reflectors (76, 86, 86; see figures 8 and 9) are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom See below.



The affidavit under 37 CFR 1.132 filed 12/23/2005 is insufficient to overcome the rejection of claims 1-6 and 8-20 based upon US005469839 (KASULIS et al) because:

In an attempt to differentiate the claimed invention from the prior art reference of US005469839 (**KASULIS et al**) Affiant states that “ In my professional opinion as an individual highly skilled in the optical arts. The Office's analysis is incorrect. The Office's recitation implies that 'an angle of incidence and an angle of reflection are both substantially equal as viewed by a viewer of the systems' because 'each panel of [the Kasulis disclosure] displays an image to a viewer that is located within the vertical surfaces'.”

The Examiner must however note that the present amended claims no longer include, and therefore are not limited to or defined by, “the viewable surface having an angle of incidence and an angle of reflection are both substantially equal as viewed by a viewer of the systems”. Therefore, Affiant’s comments in regard “an angle of incidence and an angle of reflection” are not germane to the scope of the claimed invention which now attempts to define applicant’s invention with regard to the system being “adapted to provide a three dimensional view consistent with the pre-determined interior surface of eh firebox”. Affiant’s remarks that “The Kasulis disclosure teaches the use of mirrors positioned at angles to the interior surface of the fireplace or firebox, which will create an optical view that is different in perspective from the original three dimensional construction of the fireplace or firebox.” and “The present invention, in contrast to the Kasulis disclosure, teaches the positioning of the reflective material to be substantially parallel to the interior surface of the fireplace or firebox, maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber”. However, it is noted that at least three of the reflectors (76, 86, 86; see figures 8 and 9) of Kasulis are arranged, attached and aligned parallel to three respective fireplace or firebox walls (20; 96; shown in phantom) in the same manner described by Affiant as being necessary for “maintaining an optical view consistent with the predetermined interior surface of the fireplace, firebox or fire chamber”, albeit one of the reflective surfaces (78) may be oriented at an angle. In this regard, the Examiner can not agree with Affiant that the firelight reflective system of Kasulis et al (US005469839) would not provide a three-dimensional view consistent with the pre-determined interior surface of the firebox in the manner now recited in applicant’s claims. But for Affiant’s opinion, no factual evidence has been presented that Kasulis et al (US005469839) would not provide a three-dimensional view at least to some degree and at least from one viewer’s “perspective”.

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With respect to claims 8 and 9, the Examiner acknowledges but does not agree with the rationale expressed in the following remarks made by Appellants, on pages 15-16 of the Appeal Brief.

"With regard to The Office rejects dependent Claims 8 and 9 as being unpatentable over the Kasulis patent in view of Japan disclosure 2003-79507 (the "Japan disclosure") under 35 U.S.C. § 103. Notably, the Office did not reject independent Claim 1 (which Claims 8 and 9 depend upon) as being unpatentable over the Kasulis patent in view of Japan disclosure under Section 103.

While a combination of prior art is allowed to support a rejection under Section 103, such a rejection cannot be asserted against dependent claims when the corresponding independent claim is allowed under Section 103. See *Bloom Engineering Co. Inc. v. N.A. Manuf. Co., Inc.*, 129 F.3d 1247 (Fed. Cir. 1997) ("a dependent claim incorporates by reference all of the limitations of the claim from which it depends."); see also *In re Young*, 927 F.2d 588 (Fed. Cir. 1991) ("all claims stand or fall together with representative independent claim 1"); *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888 (Fed. Cir. 1984) ("When independent and dependent claims have been argued together, the validity of the latter stands or falls with that of the former.").

Here, it follows that since Claims 8 and 9 are dependant upon independent Claim 1, and because the Office did not reject Claim 1 under Section 103 as being unpatentable over the Kasulis patent in view of the Japan disclosure, then neither claims 8 nor 9 can be rejected under Section 103 (stated differently, because Claim 1 is patentable over the Kasulis patent in view of Japan disclosure, then dependant Claims 8 and 9 are necessarily patentable over the Kasulis patent in view of the Japan disclosure). As such, Claims 8 and 9 must stand as patentable, since they are dependant upon a non-rejected claim (Claim 1) pursuant to Section 103."

Dependent claim 8 and 9 incorporate by reference all of the limitations of the claim 1 from which they ultimately depend (See *Bloom Engineering Co. Inc. v. N.A. Manuf. Co., Inc.*, 129 F.3d 1247 (Fed. Cir. 1997) ("a dependent claim incorporates by reference all of the limitations of the claim from which it depends.")). Therefore, the rejection of dependent claims 8 and 9 as being unpatentable over the Kasulis patent in view of Japan disclosure 2003-79507 addresses or includes the limitations of claim 1 which are necessarily incorporated therein by virtue of the fact that these claims are written in dependant form..

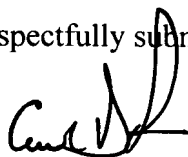
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Carl D. Price

Primary Examiner, Art Unit 3749

Conferees:

Josiah Cocks



Primary Examiner, Art Unit 3749

Eric Keasel



SPE, Art Unit 3753

Day : Friday
Date: 04-May-2007
Time: 14:18

SIRDEV MIS INTRANET

APPEAL CENTER RETURN

Application Number: 10766628

Examiner: CARL, PRICE

Date: 04-MAY-07

GAU: 3749

Appeal Document(s) that caused this Return

* Examiner's Answer

Reason for Return (from Appeal Specialist to Examiner)

The reference HISER-US004129114 or 1114" which is the correct one in the Evidence Relied Upon section. Please confirm in the text 1114 is refer to but listed as 9114 in section 8. Thanks, Bridget 2-1651

RESPONSE (by Examiner)

After correcting noted items (above) that require paper to be sent to the Appellant, please click here: then forward the appropriate documents for mailing and scanning, per TC procedures.

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